CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.14/KRIDL/CEMENT/2012-13

Date: 22.02.2013

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager (West),** KRIDL,Bangalore.
NAME OF THE WORK	:	Improvements to Cross Roads to Munikondappa Layout and Muneshwaranagara in Bagalagunte in Ward No.14, BBMP, Bangalore.
REFERENCE	:	BBMP/DZ/AEE/TDSD/PR/2012-13 Dated: 20.02.2013
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	199 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	478 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	30.00 %	-

Information is furnished by the Agency

Note:

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ಟಿ. ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಬಸವೇಶ್ವರನಗರ, ಬೆಂಗಳೂರು - 560 079

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Job No.: CTCE/BBMP/W.No.14/KRIDL/SAND/2012-13 : 22.02.2013

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL,Bangalore.

Name of Work : Improvements to Cross Roads to Munikondappa Layout and Muneshwaranagara in Bagalagunte in Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2012-13 Dated: 20.02.2013

Date of Testing : 22.02.2013

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	103	5.15	5.15	94.9	90-100
2.36	218	10.90	16.05	84.0	75-100
1.18	512	25.60	41.65	58.4	55-90
600 Micron	416	20.80	62.45	37.6	35-59
300 Micron	486	24.30	86.75	13.3	8-30
150 Micron	213	10.65	97.40	2.6	0-10

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Job No.: CTCE/BBMP/W.No.14/KRIDL/AGG/2012-13 : 22.02.2013

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL,Bangalore.

Name of Work : Improvements to Cross Roads to Munikondappa Layout and Muneshwaranagara in Bagalagunte in Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2012-13 Dated: 20.02.2013

Date of Testing : 22.02.2013

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **20000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	597	2.99	2.99	97.02	95-100
20	11768	58.84	61.83	38.18	30-70
10	5264	26.32	88.15	11.86	10-35
4.75	1986	9.93	98.08	1.92	0-5

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Job No.: CTCE/BBMP/W.No.14/KRIDL/STEEL/2012-13 25.02.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL,Bangalore.
Name of the work	:	Improvements to Cross Roads to Munikondappa Layout and Muneshwaranagara in Bagalagunte in Ward No.14, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/TDSD/PR/2012-13 Dated: 20.02.2013
Date of Test	:	25.02.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	552	13.40	O.K	O.K

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CUBE/2012-13

27.03.2013

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager (West),** KRIDL,Bangalore.
Name of the work	: Improvements to Cross Roads to Munikondappa Layout and Muneshwaranagara in Bagalagunte in Ward No.14, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2012-13 Dated: 22.02.2013
Sample ID	: Road Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.02.2013	27.03.2013	8.264	522.9	23.24
2	27.02.2013	27.03.2013	8.369	535.4	23.80
3	27.02.2013	27.03.2013	8.462	540.6	24.03

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JobNo: CTCE/BBMP/W.No.14/KRIDL/WMM/Gradation/2012-13

27.02.2013

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL,Bangalore.

Name of Work : Improvements to Cross Roads to Munikondappa Layout and Muneshwaranagara in Bagalagunte in Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2012-13 Dated: 20.02.2013

Date of Testing : 27.02.2013

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **10842**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	475	475	4.4	95.6	95-100
22.4	2364	2839	26.2	73.8	60-80
11.2	2231	5070	46.8	53.2	40-60
4.75	1932	7002	64.6	35.4	25-40
2.36	1264	8266	76.2	23.8	15-30
0.600	1440	9706	89.5	10.5	8-22
0.075	826	10532	97.1	2.9	0-8

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JobNo: CTCE/BBMP/W.No.14/KRIDL/WMM/AIV/2012-13

27.02.2013

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL,Bangalore.
Name of the Work	Improvements to Cross Roads to Munikondappa Layout and Muneshwaranagara in Bagalagunte in Ward No.14, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2012-13 Dated: 20.02.2013
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	27.02.2013

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	387	382	379	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	91	88.5	86.5	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	296	293.5	292.5	
4	Aggregate Impact value = percent fines	23.51	23.17	22.82	
	100* (W_2/W_1)%				23.17

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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